Prescribed fire: the Peninsula's safety net

by Larry Adams

I am fortunate that I work in an area where most local people understand that, in general, our wildlife benefit from forest fires. Probably less understood is the fact that every time we have a wildfire or a prescribed burn, that part of the forest has been "fire proofed" for many years to come. The more "black areas" that we can make, or allow to happen, in a patchwork fashion and under controlled conditions, the harder it will be for uncontrolled wildfires to make huge catastrophic fire runs.

These large "black areas" don't stay black forever. Both spring and summer wildland fires will kill the very flammable spruce, but spring fires often have a green blanket of plants and flowers by the late summer. Summer fires usually burn deeper and expose more mineral soil. Seeds carried by the wind during the fall and the early spring land on this soil and soon give rise to a new forest of willows, aspen, and birch. Stands of spruce provide cover for moose, but the trees themselves don't provide the big critters with any food. The new broadleaf trees and plants make up a tender "dinner plate" for more moose and hare. Where you have all that extra red meat running around, you'll find a bunch of happy wolves, bears, and lynx.

The slower growing, but longer lived spruce, will eventually over top the birch and aspen and create a very flammable situation again. This may take 70 to 100 years. As you drive along the western half of Skilak Lake Road, notice how 40 or 45-foot tall spruce are racing the 50-foot aspen towards the sky. The aspen will lose this race. Most of the forested areas along the western half of the Loop road burned during the 1947 Fire, a 310,000 acre blaze. The area is still fairly "fire proof." Oh, yes, we have our leaf fires and enlarged campfires in old burned areas, but no fires have raced and gobbled up hundreds of acres a day in the 1947 Fire area since that year. The 1991 Pothole Lake Fire burned 7,900 acres, but when it hit the boundary of the 1947 Fire near Hidden Lake Campground it stopped. When the 1996 Hidden Creek Fire burned into the 1947 Fire just south of the Skilak Loop Road, the fire dropped to the ground and we were able to easily control it. The 1969 Swanson River Fire surely would have burned more than its final size of 80,000 acres if it had not run into the western extension of the 1947 Fire.

My main job at the Refuge is to conduct prescribed burns for wildlife habitat and hazard reduction by making some of these "black areas". To reduce the risk of having an escaped fire during one of these burns, or over-cooking the soil, the Refuge fire staff has a number of tools and techniques available. We take duff moisture samples to see exactly how much moisture is in the moss and organic duff layers of the forest floor. These samples are brought to our lab where they are weighed, dried, and weighed again. After the math is done we can say with certainty how dry the forest floor is. We do the same test on black spruce needles–black spruce being our must troublesome fuel type in Alaska. For a comparison of how much moisture the twigs and branches might have in them we place in the forest precisely weighed ½ inch wooden dowels. These are weighed on site each day to see how much moisture they have gained or lost. The amount of moisture in all these forest fuels tells us a lot about how our fires will, or will not burn, and how much equipment we will need to control the fires we will light.

The Refuge has remote fire weather stations that take weather readings every hour. With our handheld radios we can trigger these stations to tell us what the weather is doing right then. These weather stations also beam up this weather data to satellites that, with the help of the internet, we are able to read on our office computers.

With my 36 years of fire control experience I can add up in my head that hot temperatures, strong winds and low humidities will give us a bad fire day. In recent years my job has been made a little less nerve racking as I am now able to run all the measured weather ingredients through my fire computer to see if I might have missed anything that might be a recipe for disaster.

The Refuge fire staff wraps all these weather conditions, personnel and equipment needs, and the needs of the wildlife and vegetation into a written "fire plan." It is reviewed at four levels to make sure it is a good plan. Then we get an air quality permit from the

Alaska Department of Conservation. Then with a little help from fire personnel at the Soldotna Forestry Office, and from the Seward Ranger District, we set out to have us a prescribed burn. Hopefully, the result will be a safer forest for all of us, and a more "user friendly" Refuge for those wild animals that help make the Kenai, the KENAI.

Larry Adams is the Fire Management Officer at the Kenai National Wildlife Refuge. He and is wife, Toni have lived in Sterling for 16 years.

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